

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A stent-catheter arrangement for placing a stent into a vessel, the stent-catheter arrangement comprising:

a catheter including an expandable balloon having a first essentially tubular section expandable to engage an interior vessel wall, a second essentially tubular section expandable to engage the interior vessel wall, and an essentially tubular segment of reduced expandability in comparison with said first and second essentially tubular sections, said essentially tubular segment of reduced expandability being provided between said first and second essentially tubular sections, each of said first and the second essentially tubular sections being connected to said segment of reduced expandability by a tapered section configured to essentially prevent blood turbulence; and

an essentially tubular stent disposed on said expandable balloon, said stent including a liquid impermeable cover,

said stent being dimensioned and configured to extend over said essentially tubular segment of reduced expandability and portions of said first and second essentially tubular sections,

said balloon ~~and said stent~~ being configured and arranged to expand said stent to form first and second essentially tubular fixing portions and an essentially tubular portion coupled to said first and second expanded fixing portions by first and second tapering portions of predetermined lengths and angles,

said essentially tubular portion having a smaller outer radial width than said first and second expanded fixing portions when said balloon is fully expanded so that said essentially tubular portion is radially spaced from the interior wall of the vessel,

~~said essentially tubular segment of said balloon of said reduced expandability being~~

~~formed by a stiffening element independent of the spent and applied to expandable material~~ one or more segments of said balloon being selectively stiffened to produce a balloon profile having the first and the second essentially tubular sections expandable to engage the interior vessel wall, and the essentially tubular segment of reduced expandability, and the tapered sections.

2. (Previously Presented) The stent-catheter arrangement according to claim 1, wherein said cover is a foil or a coating.

3. (Previously Presented) The stent-catheter arrangement according to claim 2, wherein said foil or said coating is made from body-tolerated material.

4. - 7. (Canceled)

8. (Previously Presented) The stent-catheter arrangement according to claim 2, wherein said foil or said coating consists of biological material, of polymer material, of metallic material, ceramic material or elastomer material.

9. (Canceled)

10. (Currently Amended) The stent-catheter arrangement according to claim 1, wherein ~~said segment of reduced expandability is formed of stiffened balloon material~~ at least one of the one or more segments of the balloon being selectively stiffened are stiffened by coupling one or more rings to an outer surface of the balloon.

11. - 15. (Canceled)

16. (Currently Amended) The stent-catheter arrangement according to claim 1, wherein the one or more segments of the balloon being selectively stiffened are produced by integrating stiffening elements within the balloon ~~said essentially tubular section of said balloon of said reduced expandability is produced by reducing the expandability of balloon material from said essentially tubular section during balloon production.~~

17. - 20. (Canceled)

21. (Previously Presented) The stent-catheter arrangement according to claim 2, wherein the foil or the coating comprises poly-tetra-fluoro-ethylene.

22. (Canceled)

23. (Currently Amended) The stent-catheter arrangement according to claim [[13]]1, wherein the at least one of the one or more segments of the balloon being selectively stiffened are stiffened by applying one or more stiffening elements ~~the stiffening element is applied~~ to the balloon material by a secondary process.

24. (Currently Amended) The stent-catheter arrangement according to claim [[13]]23, wherein the secondary process is an adhesive bonding process.

25. (New) A method for throttling blood in a vessel, the method comprising:
providing a catheter having an expandable balloon coupled thereto, the balloon comprising a first essentially tubular section expandable to engage an interior vessel wall, a second essentially tubular section expandable to engage the interior vessel wall, and an essentially tubular segment of reduced expandability in comparison with the first and the second essentially tubular sections, the essentially tubular segment of reduced expandability being disposed between the first and second essentially tubular sections, each of the first and the second essentially tubular sections being connected to the segment of reduced expandability by a tapered section;

coupling an essentially tubular stent coupled with a liquid impermeable to the expandable balloon;

introducing the stent coupled to the catheter into the vessel; and

causing the balloon to expand the stent to a profile having a first and a second portions contacting a vessel wall and an essentially tubular portion having an inner diameter smaller than an inner diameter of the first or second stent portions and coupled to the first and second

expanded fixing portions by first and second tapering portions of predetermined lengths and angles such to essentially prevent blood turbulence.

26. (New) The method of claim 25, wherein providing a catheter having an expandable balloon coupled thereto comprises providing the balloon with one or more segments selectively stiffened to produce a balloon profile having the first and the second essentially tubular sections expandable to engage the interior vessel wall, the essentially tubular segment of reduced expandability, and the tapered sections.

27. (New) The method of claim 26, wherein providing the balloon with one or more segments selectively stiffened comprises coupling one or more rings to an outer surface of the balloon.

28. (New) The method of claim 26, wherein providing the balloon with one or more segments selectively stiffened comprises integrating stiffening elements within the balloon.

29. (New) The method of claim 26, wherein providing the balloon with one or more segments selectively stiffened comprises applying one or more stiffening elements to the balloon by a secondary process.